

## ABSTRACT

The inventors succeeded in cloning a protein binding to Reg  
5 protein from rat pancreatic Langerhans' islet-derived cDNA. It was  
revealed that the protein expressed on the COS cell surface  
specifically binds to Reg protein. When the Reg-binding protein is  
expressed in RINm5F  $\beta$  cells, DNA synthesis and cell proliferation are  
stimulated depending on the dose of the Reg protein added to the medium,  
10 and at a higher concentration, apoptosis is induced. It is considered  
that the protein functions as a Reg receptor expressed on the surface  
of cells such as  $\beta$  cells and regulates the proliferation of these cells.  
The protein and gene thereof are useful in developing novel  
therapeutic agents for diabetes.